

File

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ENVIRONMENT

Subject:

Response to U.S. Environmental Protection Agency Comments regarding the  
Corrective Measures Study at the Former American Cyanamid Company Facility  
Hannibal, Missouri  
EPA RCRA I.D. Number MOD050226075

Date:  
July 17, 2012

Dear Mr. Dandurand:

Contact:  
Bret Overholtzer

ARCADIS, on behalf of Pfizer, has reviewed the comments provided by the U.S. Environmental Protection Agency (USEPA) in a letter dated June 14, 2012, concerning the Agricultural Production Division Facility Corrective Measures Study, dated October 13, 2011. The facility is currently owned and operated by BASF Corporation; however, Pfizer retains financial responsibility for certain historical environmental matters. This letter only responds to comments that pertain directly to Pfizer responsibilities. Responses to comments that pertain to BASF will be submitted directly by BASF, as noted below.

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For ease of review, the USEPA Comments are provided below, followed by Pfizer's response, as appropriate.

**EPA Comment 1: Corrective Measures Study, dated October 13, 2011,  
Section 8, Page 76:**

*BASF recommends Soil-2- Institutional Controls as the preferred corrective measures alternative. This alternative provides no reduction in toxicity, mobility or volume. This alternative does not provide for any plan(s) to re-sample locations in the future to determine if reductions have occurred through natural attenuation, water table fluctuation or other means. The EPA requests that BASF submit a brief summary letter describing remedial activities (i.e., source removal) that may be conducted during plant demolition, renovation, etc. to ensure a long-term plan addresses the important environmental protection standard to reduce toxicity, mobility and/or volume of contamination present on site. BASF shall also include a*

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*summary of institutional and engineering controls that are in place and/or a schedule for implementation of these controls. This summary shall be submitted in accordance with the schedule below.*

**Pfizer Response:**

The impacted areas identified in the RCRA Facility Investigation (RFI) Report and the Corrective Measures Study (CMS) are located directly beneath the active chemical plant operations, so the recommendation for Institutional Controls described in the CMS (including deed restrictions and implementation of the provisions of the Missouri Environmental Covenants Act, MoECA) is appropriate for the foreseeable future. If, in the future, the chemical plant is removed or if the impacted soil areas shown on Figure 2-1 of the CMS become assessable, Pfizer will re-evaluate the soil technologies presented in the CMS. Those soil technologies include chemical oxidation, soil vapor extraction, and/or excavation/disposal as well as other new technologies that were not available at the time when the CMS was prepared.

Once the re-evaluation has been conducted, Pfizer will prepare a work plan outlining the appropriate soil remediation activities. Any soil remediation will be limited in extent to those previously-identified areas as shown on Figure 2-1 of the CMS. The depth of any remedial activity will be limited to unsaturated soils beneath the Site.

Once this letter is reviewed and approved by the USEPA, Pfizer will begin working with BASF on implementing a MoECA for the relevant site soils and groundwater. Since BASF is the current owner and operator of the Facility, BASF will be preparing a summary of existing institutional and engineering controls that are in place at the plant and will submit this summary to USEPA under separate cover.

**EPA Comment 2: Response to USEPA Comment Letter received September 16, 2011 regarding Corrective Measures Study, dated October 14, 2011, cover letter, Attachment 1, final paragraph:**

*BASF excavates soils within contaminated areas on-site in accordance with the BASF "Safety Work Permit Program." BASF is requesting approval to return excavated soils to the excavation site or to use the soils as fill dirt elsewhere on the property using only visual, odor or industrial hygiene exposure monitoring to determine the presence or absence of contamination. The EPA is not approving these activities. All excavated soils shall be adequately characterized prior to*



*excavation to determine what, if any, regulated action is required for the excavated material. BASF shall submit an Excavation Management Plan that addresses this issue in accordance with the schedule below.*

**Pfizer Response:**

BASF is responding to this comment directly to USEPA under a separate cover letter.

**EPA Comment 3: Response to USEPA Comment Letter received September 16, 2011 regarding Corrective Measures Study, dated October 14, 2011, Response to Comment 7:**

*BASF agrees that the Regional Screening Levels (RSLs) for residential soils and the maximum contaminant levels (MCLs) for groundwater will be considered the final cleanup levels within the response to Comment 7. However, Section 4.5, Page 23 of the revised CMS indicates BASF considers these levels to be screening criteria and not final regulatory cleanup levels. The EPA is approving the RSLs for residential soils and the MCLs, or tapwater RSLs for contaminants without MCLs, to be the final regulatory cleanup levels for the BASF facility.*

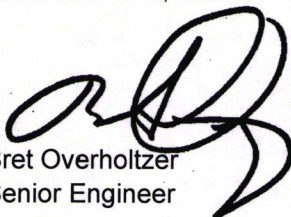
**Pfizer Response:**

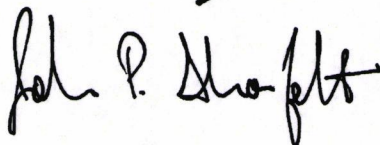
Comment noted. However, once the deed restrictions under the MoECA are in place excluding the property from being used for residential purposes, BASF may propose that the EPA Regional Screening Levels (RSLs) for non-residential soil cleanup levels be used as the final cleanup levels. The use of residential cleanup levels beneath a chemical plant surrounded by an industrial levee adjacent to the Mississippi River is not realistic or warranted once the institutional controls under the MoECA are in place. This approach utilizing land use controls to control future risk at industrial sites is consistent with the intent of the Missouri Environmental Covenants Act.

ARCADIS appreciates the opportunity to respond to the USEPA's comments on the CMS. Please feel free to contact us if you have any additional questions.

Sincerely,

ARCADIS U.S., Inc.

  
Bret Overholtzer  
Senior Engineer

  
John P. Shonfelt  
Senior Project Manager

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Tom Donohue – Pfizer  
Richard Nussbaum – Missouri Department of Natural Resources